

What is claimed is:

1. An antiscatter device for absorption of secondary radiation scattered by an object, comprising:

an absorption structure including a plurality of elements, wherein at least two elements form a cell-like structure with a beam channel for primary radiation, and wherein a plurality of cell structures are at least one of arranged and formed such that the absorption structure includes a non-regular, aperiodic pattern.

2. The antiscatter device as claimed in claim 1, wherein two adjacent elements of a cell-like structure are at an angle that is not equal to 90° with one another.

3. The antiscatter device as claimed in claim 2, wherein four elements form a cell-like structure in the form of a rhombus.

4. The antiscatter device as claimed in claim 3, wherein two different rhombus types are provided among the plurality of cell-like structures, each having two different angles between two elements.

5. The antiscatter device as claimed in claim 4, wherein the absorption structure has a Penrose pattern.

6. The antiscatter device as claimed in claim 1, wherein the absorption structure is produced by stereolithography using a rapid prototyping technique.

7. The antiscatter device as claimed in claim 1, wherein the elements are at least one of wall-like and

web-like, and include a material which is transparent for at least one of X-ray and gamma radiation.

8. The antiscatter device as claimed in claim 7, wherein inner surfaces of the elements are provided with a coating which absorbs secondary radiation.

9. The antiscatter device as claimed in claim 7, wherein the elements include a synthetic resin.

10. The antiscatter device as claimed in claim 8, wherein the coating is at least one of sputtered on and deposited electrochemically.

11. The antiscatter device as claimed in claim 9, wherein the coating is at least one of sputtered on and deposited electrochemically.

12. An arrangement, comprising:
a radiation detector; and
an antiscatter device as claimed in claim 1.

13. The arrangement as claimed in claim 12, wherein the radiation detector includes a plurality of detector elements arranged in the form of a matrix in row and column directions.

14. The arrangement as claimed in claim 12, wherein the antiscatter device is arranged separately from the radiation detector, with both the antiscatter device and the radiation detector being immovable, at least during recording of a radiation image.

15. The arrangement as claimed in claim 13, wherein the antiscatter device is arranged separately from the radiation detector, with both the antiscatter device

and the radiation detector being immovable, at least during recording of a radiation image.

16. The arrangement as claimed in claim 12, wherein the antiscatter device is movable.

17. The arrangement as claimed in claim 13, wherein the antiscatter device is movable.

18. The arrangement as claimed in claim 12, wherein the antiscatter device is displacable with respect to a stationary radiation detector.

19. The arrangement as claimed in claim 13, wherein the antiscatter device is displacable with respect to a stationary radiation detector.

20. The arrangement as claimed in claim 12, wherein the antiscatter device is firmly mechanically connected to the radiation detector.

21. The arrangement as claimed in claim 13, wherein the antiscatter device is firmly mechanically connected to the radiation detector.

22. The arrangement as claimed in claim 20, wherein the antiscatter device is connected to the radiation detector at least one of directly and via an intermediate layer.

23. The arrangement as claimed in claim 21, wherein the antiscatter device is connected to the radiation detector at least one of directly and via an intermediate layer.

24. The antiscatter device of claim 1, wherein the device is a grid.

25. The antiscatter device of claim 1, wherein the device is a collimator.

26. The antiscatter device of claim 1, wherein the elements are at least one of wall-like and web-like.

27. The antiscatter device as claimed in claim 7, wherein the elements include a lead coating.

28. The arrangement of claim 12, wherein the radiation detector is at least one of an X-ray and a gamma detector.

29. The arrangement of claim 12, wherein the antiscatter device is a grid.

30. The arrangement of claim 12, wherein the antiscatter device is a collimator.

31. An arrangement, comprising:
 means for detecting radiation; and
 antiscatter means for absorption of secondary radiation scattered by an object, the antiscatter means including an absorption structure with a plurality of elements, at least two elements forming a cell-like structure with a beam channel for passing primary radiation, and at least two cell structures being at least one of arranged and formed such that the absorption structure includes a non-regular, aperiodic pattern.

32. The arrangement as claimed in claim 32, wherein the radiation detector includes a plurality of detector elements arranged in the form of a matrix in row and column directions.

33. The arrangement as claimed in claim 32, wherein the antiscatter means is arranged separately from the radiation detector, with both the antiscatter means and the radiation detector being immovable, at least during recording of a radiation image.

34. The arrangement as claimed in claim 32, wherein the antiscatter means is movable.